

Message Text

LIMITED OFFICIAL USE

PAGE 01 USUN N 00914 260235Z
ACTION L-03

INFO OCT-01 IO-13 ISO-00 ACDA-07 CIAE-00 DODE-00 PM-04
INR-07 NSAE-00 NASA-01 NSC-05 ERDA-05 OES-06
AF-08 ARA-06 EA-07 EUR-12 NEA-10 /095 W
-----261131Z 118648 /14
R 260058Z MAR 77
FM USMISSION USUN NEW YORK
TO SECSTATE WASHDC 2940

LIMITED OFFICIAL USE USUN0914

E.O. 11652: N/A
TAGS: TSPA, UN, AORG
SUBJECT: OUTER SPACE LEGAL SUBCOMMITTEE: GEOSYNCHRONOUS ORBITS

SUMMARY:USDEL PROPOSED TEXT ON GEOSYNCHRONOUS QUESTION, AND
REQUESTS AUTHORITY FOR ITS SUBMISSION DURING CURRENT LSC SES-
SION. END SUMMARY.

1. USDEL PROPOSED TO MAKE STATEMENT IN LAST WEEK OF LSC ON
GEOSTATIONARY ORBIT. FOLLOWING IS PROPOSED TEXT ON SCIENTIFIC
ASPECTS OF SUBJECT. DEPARTMENT LEGAL ADVISER WAS TO FURNISH
TEXT ON LEGAL IMPLICATIONS, WHICH HAS NOT AS YET BEEN RECEIVED.
AUTHORITY TO SUBMIT THIS STATEMENT REQUESTED.

2. QUOTE. IN CONNECTION WITH THE DISCUSSION OF THE DELIMI-
TATION OF OUTER SPACE, WE HAVE HEARD SEVERAL STATEMENTS CON-
CERNING THE NATURE AND STATUS OF THE GEOSYNCHRONOUS ORBIT AND
THE STATUS IN SUCH AN ORBIT OF A GEOSTATIONARY SATELLITE.
THERE ARE BASICALLY TWO ASPECTS TO THIS MATTER: THE SCIENTIFIC/
TECHNICAL CONSIDERATIONS AND THE LEGAL CONSIDERATIONS.

3. FROM A SCIENTIFIC AND TECHNICAL STANDPOINT THE GEOSYN-
CHRONOUS ORBIT OF THE EARTH IS LIKE ANY OTHER ORBIT WHICH
IS REGULARIZED, STANDARDIZED OR REPEATED. LANDSAT SATEL-
LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 02 USUN N 00914 260235Z

LITES, FOR EXAMPLE, MOVE IN A POLAR, SUN-SYNCHRONOUS ORBIT,
CALCULATED TO PROVIDE REPETITIOUS COVERAGE OF THE EARTH'S
SURFACE ONCE EVERY 18 DAYS. AS IN A POLAR ORBIT CASE, THE
GEOSYNCHRONOUS ORBIT SPACECRAFT IS MOVING CONSTANTLY AND
SHIFTING POSITIONS. ITS PATH THROUGH SPACE IS DETERMINED
BY A COMBINATION OF ACTORS, INCLUDING AT LEAST THE ENERGY
IMPARTED BY THE LAUNCH VEHICLE, THE MASS OF THE SPACE-

CRAFT, THE ALTITUDE AT WHICH IS MOVES ABOVE THE EARTH, THE FORCES OF GRAVITY OF THE EARTH, THE MOON, THE SUN, AND THE RADIATION PRESSURE OF THE SUN. CONSEQUENTLY, IT IS CLEAR THAT THE GEOSYNCHRONOUS ORBIT IS ONLY A CONCEPT, NOT A NATURAL RESOURCE.

4. A SPACECRAFT IN SUCH AN ORBIT MOVES CONSTANTLY, AND ALTHOUGH IT MAY HAVE A HARMONIC MOTION ABOUT SOME POINT, OR IN A FIGURE EIGHT MODE, ABOUT SOME POINTS, WHICH ARE CONSTANTLY SHIFTING, THE BEHAVIOR OF THE SPACECRAFT IS INFLUENCED BY THE MANY FACTORS JUST MENTIONED. NORMALLY, A SPACECRAFT WILL NOT STAY IN A GEOSYNCHRONOUS ORBIT INDEFINITELY WITHOUT CORRECTIVE MANUEVERS. THERE ARE TWO POSITIONS WITHIN THE SO-CALLED SYNCHRONOUS ORBIT WHERE A SPACECRAFT COULD ESTABLISH A GEOSTATIONARY POSITION, I.E. A FIXED LOCATION WITH RESPECT TO THE EARTH. THESE TWO POSITIONS, DUE TO THE ELLIPTICAL SHAPE OF THE EARTH'S EQUATOR, ARE LOCATED AT APPROXIMATELY 105.5 W. LONGITUDE AND 75 E. LONGITUDE. BOTH ARE OVER OPEN OCEAN - ONE OVER THE PACIFIC, THE OTHER OVER THE INDIAN OCEAN.

5. IN THE DECEMBER 3, 1976 DECLARATION OF BOGOTA IT IS STATED THAT "THE GEOSTATIONARY SYNCHRONOUS ORBIT IS A PHYSICAL FACT LINKED TO THE REALITY OF OUR PLANET BECAUSE ITS EXISTENCE DEPENDS EXCLUSIVELY ON ITS RELATION TO GRAVITATIONAL PHENOMENA GENERATED BY THE EARTH." IF GRAVITY WERE THE EXCLUSIVE FORCE ACTING UPON A GEOSTATIONARY SATELLITE, ITS FLIGHT PATH WOULD BE A VERTICAL DROP TO LIMITED OFFICIAL USE

LIMITED OFFICIAL USE

PAGE 03 USUN N 00914 260235Z

THE SURFACE OF THE EARTH.

6. IN HIS REPORT TO THE LEGAL SUBCOMMITTEE ON CURRENT DEVELOPMENTS IN AND RECENT WORK OF THE ITU, THE DEPUTY SECRETARY-GENERAL OF THE ITU CONSISTENTLY DESCRIBED THAT WORK IN CONNECTION WITH THE GEOSYNCHRONOUS ORBIT AS DEALING WITH "NOMINAL ORBITS" AND "NOMINAL ORBIT LOCATIONS." THE REASON OF COURSE IS TO REFLECT THE FACT THAT SUCH POSITIONS IN SPACE ARE ONLY NOMINAL AND REQUIRE CONSTANT MONITORING AND ADJUSTMENT.

7. THERE ARE MANY FACTORS INFLUENCING THE MOVEMENT OF SPACECRAFT IN ORBIT ABOUT THE EARTH. AMONG THEM IS THE INFLUENCE OF VARYING RELATIVE MOTIONS OF SUCH SPACECRAFT AND THE EARTH. ADDITIONALLY THERE IS THE NEED FOR CONTINUOUS TRACKING, GUIDANCE AND CONTROL OF SPACECRAFT TO MAINTAIN THEM IN A GEOSYNCHRONOUS MOTION. IN VIEW OF THOSE FACTORS ALONE IT IS AMPLY CLEAR THAT THERE IS NO NATURAL OR DEFINABLE RESOURCE WHICH CONSTITUTES A PER-

MANENT LOCATION IN THE SO-CALLED GEOSYNCHRONOUS ORBIT.
THEREFORE, CONSIDERED ON SCIENTIFIC AND TECHNICAL GROUNDS,
WE MUST DISMISS THE ASSERTION THAT THERE EXISTS A NATURAL
RESOURCE, LOCATED OUT IN SPACE AT A DISTANCE EQUIVALENT
TO NEARLY THREE TIMES THE DIAMETER OF THE EARTH, WHICH
CAN BE LEGITIMATELY CLAIMED AS UNDER THE NATIONAL SOVER-
EIGNTY OF ANY STATE. END QUOTE.

8. WITH RESPECT TO THE LEGAL CONSIDERATION OF THIS
QUESTION DEL AWAITS GUIDANCE PROMISED FROM L/UNA.
YOUNG

LIMITED OFFICIAL USE

NNN

Message Attributes

Automatic Decaptioning: X
Capture Date: 01-Jan-1994 12:00:00 am
Channel Indicators: n/a
Current Classification: UNCLASSIFIED
Concepts: SATELLITES, SPACE EXPLORATION
Control Number: n/a
Copy: SINGLE
Sent Date: 26-Mar-1977 12:00:00 am
Decaption Date: 01-Jan-1960 12:00:00 am
Decaption Note:
Disposition Action: RELEASED
Disposition Approved on Date:
Disposition Case Number: n/a
Disposition Comment: 25 YEAR REVIEW
Disposition Date: 22 May 2009
Disposition Event:
Disposition History: n/a
Disposition Reason:
Disposition Remarks:
Document Number: 1977USUNN00914
Document Source: CORE
Document Unique ID: 00
Drafter: n/a
Enclosure: n/a
Executive Order: N/A
Errors: N/A
Expiration:
Film Number: D770104-0893
Format: TEL
From: USUN NEW YORK
Handling Restrictions: n/a
Image Path:
ISecure: 1
Legacy Key: link1977/newtext/t19770318/aaaaapgv.tel
Line Count: 127
Litigation Code IDs:
Litigation Codes:
Litigation History:
Locator: TEXT ON-LINE, ON MICROFILM
Message ID: 34f739b1-c288-dd11-92da-001cc4696bcc
Office: ACTION L
Original Classification: LIMITED OFFICIAL USE
Original Handling Restrictions: n/a
Original Previous Classification: n/a
Original Previous Handling Restrictions: n/a
Page Count: 3
Previous Channel Indicators: n/a
Previous Classification: LIMITED OFFICIAL USE
Previous Handling Restrictions: n/a
Reference: n/a
Retention: 0
Review Action: RELEASED, APPROVED
Review Content Flags:
Review Date: 31-Mar-2005 12:00:00 am
Review Event:
Review Exemptions: n/a
Review Media Identifier:
Review Release Date: n/a
Review Release Event: n/a
Review Transfer Date:
Review Withdrawn Fields: n/a
SAS ID: 2983986
Secure: OPEN
Status: NATIVE
Subject: OUTER SPACE LEGAL SUBCOMMITTEE: GEOSYNCHRONOUS ORBITS SUMMARY:USDEL PROPOSED TEXT ON GEOSYNCHRONOUS QUESTION, AND REQUESTS AUTHORITY FOR ITS SUBMISS ION DURING CURRE
TAGS: TSPA, AORG, XX, UN, OUTER SPACE LEGAL SUBCOMMITTEE
To: STATE
Type: TE
vdkgvwkey: odbc://SAS/SAS.dbo.SAS_Docs/34f739b1-c288-dd11-92da-001cc4696bcc
Review Markings:
Margaret P. Grafeld
Declassified/Released
US Department of State
EO Systematic Review
22 May 2009
Markings: Margaret P. Grafeld Declassified/Released US Department of State EO Systematic Review 22 May 2009